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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/596,681	06/21/2006	Uwe Scheim	WAS0778PUSA	9418

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EXAMINER

OJURONGBE, OLATUNDE S

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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05/07/2009

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/596,681	Applicant(s) SCHEIM ET AL.	
	Examiner OLATUNDE S. OJURONGBE	Art Unit 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed on 02/06/2009 has been entered. Claims 10-21 are pending in the application.

Claim Objections

2. **Claims 14 and 21** are objected to because of the following informalities:

Claims 14 and 21 recite " wherein at *last* one organosilicon compound (A)" instead of "wherein at least one organosilicon compound (A)".

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. **Claims 10-21** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claims 1 and 21 recite "N-bonded amino, N-bonded amide"; there is no support for these radicals in the originally filed application.

Dependent claims 11-20 are rejected for the same reason.

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

6. **Claims 10-21** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 21 recite "N-bonded amino, N-bonded amide"; it is unclear what radicals the applicants try to claim as it is unclear whether this means that the nitrogen of the amino and/or amide groups are bonded to the silicon atoms of the organosilicon compound of the claims or that they are bonded to other units not specified in the instant application.

Dependent claims 11-20 are rejected for the same reason.

Claim Rejections - 35 USC § 103

7. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior office action.

8. **Claims 10-21** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Yu (US 2002/0161116)** in view of **Schattenmann et al (US 2003/0045666)**.

Regarding **claims 10 and 18**, Yu teaches a composition for treating textile [0003, lines 1-5] comprising a compound of the formula 2 [0012] and compounds of the formula 3b [0017]; Yu further teaches that B¹ and B² on the compound of formula 2 are selected from the groups which include alkoxy [0026] and that R¹¹ and R¹² on the compound of formula 3b are selected from the groups that include C₁-C₆ hydrocarbon moieties

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[0036]. The compound of the formula 2 and compounds of the formula 3b of Yu serve as at least one organosilicon compound having at least two condensable groups of the instant claim.

Yu further teaches forming a condensation reaction product from an aqueous emulsion of the compounds of the invention [0040-0073]. The condensation reaction type composition of Yu is a moisture curable single component crosslinkable material because it contains moisture curable functional groups. Since Yu teaches the composition of the invention without water, then the composition of the invention of Yu is storage stable in the absence of water.

By forming a condensation reaction product from an aqueous emulsion of the composition of the invention, Yu teaches curing the composition to an elastomer in the presence of water.

Though Yu does not teach a moisture curable single component crosslinkable material comprising at least one organosilicon compound having at least one unit of the formula (II) of the instant claim, Yu further teaches that other polysiloxanes can be added to the composition of the invention [0106, lines 1-7].

Schattenmann et al teaches organopolysiloxane polymers bearing quaternary ammonium groups of the general formula (I) [0017] and exemplifies the organopolysiloxanes [0042, line 1-0043, line 2]; Schattenmann et al further teaches that the organopolysiloxanes having quaternary ammonium groups can be used in bacteriocidal or as constituents of textile finishings [0083, lines 1-5].

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Since both compositions of Yu and Schattenmann et al are in the same field of endeavor- compositions for textile finishings-and the bacteriocidal/germicidal effect of siloxanes bearing quaternary ammonium groups is known in the art, motivated by the bacteriocidal effect of the organopolysiloxane having quaternary ammonium groups of Schattenmann et al , it would have been obvious to one of ordinary skill in the art to have incorporated any of these organopolysiloxanes-including that of 0042, line 1-0043, line 2- into the composition of Yu.

Regarding **claim 11**, modified Yu further teaches examples of compounds of the formula 3b to include methyltrimethoxysilane [0126, line 1].

Methyltrimethoxysilane conforms to formula (I) of the instant claim.

Regarding **claim 12**, the taught organopolysiloxane [Schattenmann et al, 0042, line 1-0043, line 2] of modified Yu conforms to the general formula (III) of the instant claim.

The $-(\text{Si}(\text{CH}_3)_2\text{O})_{50}-$ radical of the organopolysiloxane [0042, line 1-0043, line 2] is the same as $-\text{Si}(\text{CH}_3)_2-(\text{OSi}(\text{CH}_3)_2)_{49}-$; when m is for example 2, and starting a repeating unit from $-(\text{OSi}(\text{CH}_3)_2)_{49}-$ and ending at $-\text{Si}(\text{CH}_3)_2-$ of the split $-(\text{Si}(\text{CH}_3)_2\text{O})_{50}-$,

- D^1 is a hydrogen atom,
- h is 0,
- d is 50 (a combination of $-(\text{OSi}(\text{CH}_3)_2)_{49}-$ and the $-\text{Si}(\text{CH}_3)_2-$ next to it),
- R^2 is CH_3 ,
- R^4 is $-(\text{CH}_2)_3\text{OCH}_2-\text{A}-$ of Schattenmann et al,

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- R^3 is CH_3 ,
- g is 0,
- K is 0,
- n is 2,
- X^- is Cl^- .

Regarding **claim 13**, modified Yu further teaches the organopolysiloxanes having quaternary ammonium groups having a viscosity of preferably 50,000 to 5,000,000 mPas at 25°C [Schattenmann et al, 0054, lines 1-3].

Regarding **claim 14**, modified Yu teaches that in formula 2, R^4 , R^5 and R^6 are selected from group consisting of alkyl groups of from 1 to 4 carbon atoms, B^1 and B^2 are selected from groups that include alkoxy, w is an integer from 1 to about 1000, G is selected from groups that include alkoxy and x is an integer from 0 to about 50 [0050-0057].

Regarding **claim 15**, though modified Yu does not explicitly teach the crosslinkable material consisting essentially of (A), (B) and (C) one or more crosslinking agents of the formula (V), of the instant claim, since modified Yu teaches specific examples of formula 3b of the invention to include methyltrimethoxysilane and other silanes such as methyltriethoxysilane [0126], one of ordinary skill in the art would have used more than one compound of formula 3b of modified Yu in the composition of modified Yu by

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routine experimentation with an expectation of success. It is *prima facie* obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose. The idea of combining them flows logically from their having been individually taught in the prior art. The methyltriethoxysilane of modified Yu serves as the crosslinking agent of the instant claim.

The transitional phrase "consisting essentially of" limits the scope of a claim to the specified materials or steps "and those that do not materially affect the basic and novel characteristic(s)" of the claimed invention, absent a clear indication in the specification or claims of what the basic and novel characteristics actually are, "consisting essentially of" will be construed as equivalent to "comprising." The examiner's stance on the claim language "consisting essentially of" remains as thus stated wherever the claim language appears in the instant application.

Regarding **claim 16**, modified Yu further teaches that when the composition of the invention are used as textile coatings, a catalyst is preferably present [0123, lines 1-3], hence, the composition of modified Yu consist essentially of the organopolysiloxanes having quaternary ammonium groups [Schattenmann et al, 0017 and 0046], the compound of the formula 2[0012], the compounds of the formula 3b [0017] and the catalyst.

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Regarding **claim 17**, modified Yu further teaches curing the composition of the invention to obtain a condensation product [0136, lines 17-19]. The condensation product is a molding produced by crosslinking the crosslinkable material.

Regarding **claims 19 and 20**, the compound of formula 3b of modified Yu serves as the crosslinker of the instant claim. Modified Yu teaches specific examples of the compound of formula 3b to include methyltrimethoxysilane [0126].

Regarding **claim 21**, Yu teaches a composition for treating textile [0003, lines 1-5] comprising a compound of the formula 2 [0012] and compounds of the formula 3b [0017]; the compound of the formula 2 and compounds of the formula 3b of Yu serve as at least one organosilicon compound having at least two condensable groups of the instant claim. Yu further teaches that in formula 2, R^4 , R^5 and R^6 are selected from group consisting of alkyl groups of from 1 to 4 carbon atoms, B^1 and B^2 are selected from groups that include alkoxy, w is an integer from 1 to about 1000, G is selected from groups that include alkoxy and x is an integer from 0 to about 50 [0050-0057].

Yu further teaches forming a condensation reaction product from an aqueous emulsion of the compounds of the invention [0040-0073]. The condensation reaction type composition of Yu is a moisture curable single component crosslinkable material because it contains moisture curable functional groups. Since Yu teaches the composition of the invention without water, then the composition of the invention of Yu is storage stable in the absence of water.

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By forming a condensation reaction product from an aqueous emulsion of the composition of the invention, Yu teaches curing the composition to an elastomer in the presence of water.

Though Yu does not teach a moisture curable single component crosslinkable material comprising at least one organosilicon compound having at least one unit of the formula (II) of the instant claim, Yu further teaches that other polysiloxanes can be added to the composition of the invention [0106, lines 1-7].

Schattenmann et al teaches organopolysiloxane polymers bearing quaternary ammonium groups of the general formula (I) [0017] and exemplifies the organopolysiloxanes [0042, line 1-0043, line 2]; Schattenmann et al further teaches that the organopolysiloxanes having quaternary ammonium groups can be used in bacteriocidal or as constituents of textile finishings [0083, lines 1-5].

Since both compositions of Yu and Schattenmann et al are in the same field of endeavor- compositions for textile finishings-and the bacteriocidal/germicidal effect of siloxanes bearing quaternary ammonium groups is known in the art, motivated by the bacteriocidal effect of the organopolysiloxane having quaternary ammonium groups of Schattenmann et al , it would have been obvious to one of ordinary skill in the art to have incorporated any of these organopolysiloxanes-including that of 0042, line 1-0043, line 2- into the composition of Yu.

Response to Arguments

9. Applicants' arguments filed on 02/06/2009 have been fully considered but they are not persuasive.

The applicants argue that Yu is not an analogous reference. The applicants state that the field of endeavor of Yu is the treatment of fabrics while the field of endeavor of applicants is the preparation of antimicrobial moisture curing RTVI elastomer compositions, e.g., caulks and sealants. The examiner disagrees.

That the instant invention is directed to caulks and sealants is a limitation that is not in the instant claims, even in the case that this limitation is included in the claims, the examiner notes that the purpose or intended use of the claimed invention which do not result in a structural difference between the claimed invention and the prior art do not limit the claim and do not distinguish over the prior art composition.

The applicants further argue that the combination of Schattenmann and Yu does not teach or suggest the present invention. Schattenmann teaches non-crosslinkable (non-moisture curable) quaternary ammonium group-containing compounds. The examiner disagrees.

The combination of Yu and Schattenmann teaches the invention as stated above.

Concerning the quaternary ammonium group-containing compounds of Schattenmann being non-crosslinkable, the examiner notes that the instant claims do not include the limitation that the quaternary ammonium group-containing compound is crosslinkable.

Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. The quaternary ammonium group-containing

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compounds of modified Yu meets the limitations of the instant claims and modified Yu teaches the moisture curable composition of the instant claims as stated above.

The applicants further argue that the composition of Yu is clearly not moisture curable. If it were, it would rapidly gel in the aqueous dispersions of Yu, yet he states that these compositions are storage stable. The applicants further cite an example of a handyman utilizing the composition and state that the compositions of Yu require application to the substrate and heating at elevated temperature. The examiner disagrees.

That the aqueous compositions of modified Yu is storage stable does not mean that the compositions are not moisture curable; the ability of a composition to cure in the presence of moisture depends on the presence of moisture curable functional groups on the compounds of the composition, since the composition of modified Yu comprises compounds bearing these moisture curable functional groups, then the composition of modified Yu is moisture curable. Furthermore, though modified Yu teaches that the composition of the invention is preferably in the form of an aqueous emulsion, the applicants should note that the disclosure of modified Yu is not limited to preferred embodiments, rather, it encompasses all embodiments taught by the reference.

Concerning the composition of modified Yu requiring heating, the examiner notes that the curing temperature of the compositions of the instant claims is not specified.

The applicants further argue that adding the quaternary ammonium compounds of Schattenmann to the composition of Yu would not be feasible. The Schattenmann polymers do not have residual epoxy groups to react, nor do they have any condensable groups. The examiner disagrees.

One of ordinary skill in the art would have combined Yu and Schattenmann as stated above. Modified Yu teaches the quaternary ammonium compounds of the invention bearing reactive groups such as OH and Cl.

The applicants' arguments have failed to put the application in condition for allowance.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLATUNDE S. OJURONGBE whose telephone number is (571)270-3876. The examiner can normally be reached on Monday-Thursday, 7.15am-4.45pm, EST time, Alt Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on (571)272-1302. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

O.S.O.

/Randy Gulakowski/
Supervisory Patent Examiner, Art Unit 1796